ABSTRAK

Febrayanty, Rully: 2014. Penerapan Pendekatan *Brain Based Learning* Berbantuan Media Pembelajaran dalam Pembelajaran Matematika untuk Meningkatkan Kemampuan Koneksi Matematis Siswa SMA.

Penelitian ini dilatarbelakangi atas dibutuhkannya suatu model pembelajaran yang mampu mengoptimalkan fungsi otak. *Brain Based Learning* merupakan salah satu pendekatan pembelajaran yang dapat diterapkan untuk mengoptimalkan fungsi otak dalam pembelajaran serta diharapkan mampu meningkatkan koneksi matematis siswa. Tujuan penelitiannya adalah untuk mengetahui apakah kemampuan koneksi matematis siswa yang mendapatkan pembelajaran dengan pendekatan *Brain Based Learning* lebih tinggi daripada siswa yang mendapatkan pembelajaran langsung dan untuk mengetahui apakah peningkatan kemampuan koneksi matematis siswa yang mendapatkan pembelajaran dengan pendekatan *Brain Based Learning* lebih tinggi daripada siswa yang mendapatkan pembelajaran langsung. Penelitian ini menggunakan metode kuasi eksperimen dan desain kelompoj kontrol non-ekivalen. Populasi dalam penelitian ini adalah seluruh siswa kelas XI IPS SMA Negeri 1 Tanjungpandan-Belitung dengan sampelnya yaitu kelas XI IPS 1 dan XI IPS 2. Adapun data penelitian, diperoleh melalui tes kemampuan koneksi matematis, angket, jurnal harian, serta lembar observasi. Berdasarkan hasil analisis terhadap data-data yang terkumpul, maka kesimpulan dari penelitian ini adalah (1) kemampuan koneksi matematis siswa yang memperoleh pembelajaran dengan pendekatan *Brain Based Learning* (BBL) lebih tinggi daripada kemampuan koneksi matematis siswa yang memperoleh pembelajaran langsung dan (2) peningkatan kemampuan koneksi matematis siswa yang memperoleh pembelajaran dengan pendekatan *Brain Based Learning* (BBL) lebih tinggi daripada peningkatan kemampuan koneksi matematis siswa yang memperoleh pembelajaran langsung.

Kata Kunci: Pembelajaran Berbasis Oitak (Brain Based Learning), Pembelajaran Langsung (Direct Instructions), Kemampuan Koneksi Matematis, Media Pembelajaran Matematika.

ABSTRACT

Febrayanty, Rully: 2014. Application of Brain-Based Learning Approach Assisted Media Learning in Mathematics Learning to Increase Mathematical Connections Capabilities of High School Students.

This research is motivated by needs a model learning that is able to optimize brain function. Brain Based Learning is a learning approach that can be applied to optimize brain function in learning and are expected to increase the students' mathematical connections. The purpose of the research was to determine whether the ability of students mathematical connections that receives learning with Brain Based Learning approach higher than students which received direct instructions and to determine whether the increased ability of students mathematical connections that receives learning with Brain Based Learning approach higher than students which receives direct instruction. This research used a quasi-experimental methods and design of non-equivalent control group. The population in this research were all students of class XI Social SMAN 1 Tanjungpandan-Belitung with the sample that are class XI IPS 1 and XI IPS 2. The research data, obtained through mathematical connection ability tests, questionnaires, daily journals, as well as the observation sheet. Based on the analysis result of the data collected, the conclusions of this research are (1) the mathematical connection ability of students which receives learning with Brain Based Learning (BBL) approach is higher than the mathematical connection ability of students which receives learning with direct instruction and (2) increase the mathematical connection ability of students which receives learning with which received learning Brain Based Learning (BBL) approach is higher than the increase of the mathematical connection ability of students which receives learning which received direct instructions.

Keywords: Brain Based Learning Brain Based Learning, Direct Instructions, Mathematical Connection Ability, Media Learning Mathematics.